

REMARKS

Claims 1-11 have been amended.

Withdrawn Claims 12-23 have been cancelled without prejudice.

Claims 1-11 are currently pending in this application.

Claims 1, 4, 8, and 10 are in independent form.

1. Rejections Under 35 U.S.C. § 112

The Examiner's rejection of Claims 1-11 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement is respectfully traversed. Specifically, the Examiner's stated basis for the rejection is that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed. In particular, the Examiner states that the Specification fails to describe the "movable" vehicle service apparatus as claimed in the independent Claims 1, 4, 8, and 10. The Examiner questions how this feature is described in the Specification, and where it is shown.

In response, Applicant respectfully directs the Examiner's attention to the vehicle service apparatus (100) described throughout the specification and shown in Figures 2-6. The vehicle service apparatus (100) is clearly described as being "positioned relative to a vehicle" by an operator, who adjusts placement of the apparatus (100) to a recommended position and orientation relative to the vehicle in response to guidance from a separate vehicle wheel alignment system. See: Paras. [0031], [0034], [0038], [0039], [0041]-[0043], [0048], [0050]-[0051]. Movement (i.e., positioning) of the vehicle service apparatus 100 relative to a vehicle is a fundamental aspect of the present

application, and the Examiner's rejections thereof under 35 U.S.C. § 112 suggests a misunderstanding of the claimed invention. As set out in the Abstract, the present invention is directed towards a machine vision system (wheel alignment system) configured to facilitate the placement of a vehicle service apparatus relative to an associated vehicle.

In view of the possibility of the Examiner's confusion arising from Applicant's prior amendments to the claims wherein the term "movable" was inserted to distinguish over the '609 *Murray et al.* reference, Applicant has hereby further amended the claims to replace the term "movable" with the term "positionable" to more closely mirror the language in the Specification as identified above describing the vehicle service system (100) as being able to be moved to a desired position and orientation (i.e. positioned) by an operator.

Regarding the '609 *Murray et al.* reference, the Examiner appears to be maintaining the stated position that the '609 *Murray et al.* reference teaches a "movable" vehicle service apparatus, citing Fig. 3, and Col. 3, lines 14-47. Furthermore, the Examiner contends that Applicant's claims do not state that the vehicle service apparatus is "separate from the vehicle wheel alignment system" or that the vehicle service apparatus is guided for placement relative to the vehicle.

Applicant disagrees with the Examiner's statements regarding the content of the claims. Claim 1 specifically describes in the preamble "an improved vehicle wheel alignment system". The first limitation of the claim is to a camera" mounted to a positionable vehicle service apparatus. The use of the term "a" clearly denotes that the vehicle service apparatus is a different structure from the "vehicle wheel alignment

system” previously described. Furthermore, the second limitation of Claim 1 clearly states that the computer of the vehicle wheel alignment system is configured to “... guide the placement of said positionable vehicle service apparatus relative to the vehicle.”

Although Applicant strongly feels these limitations are clearly present in the claims, to further clarify that which Applicants have invented, and for which coverage is sought, Claims 1, 4, 8, and 10 have been further amended to specifically state that the vehicle service apparatus (100) is separate from the vehicle wheel alignment system.

In view of Examiner’s apparent misunderstanding as to the nature of the present invention, Applicant respectfully requests that the Finality of the present Office Action with withdrawn to permit entry of this amendment and further dialog with the Examiner to ensure a proper understanding and complete examination of the present invention.

2. Rejections Under 35 U.S.C. § 102

a. Claims 1-11

The Examiner’s rejection of Claims 1-11 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,728,609 B2 to *Murray et al.* is respectfully traversed.

The Examiner’s stated basis for the rejection of independent Claim 1 is that the ‘609 *Murray et al.* reference discloses an improved machine vision vehicle wheel alignment system having all of the components of Claim 1.

The MPEP §2131 provides:

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.” *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d

628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as contained in the ... claim” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 9 USQP2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

Contrary to the Examiner’s statements that all elements of independent Claim 1 are disclosed by the ‘609 *Murray et al.* reference, at least the required limitations of a positionable vehicle service apparatus on which is mounted at least one additional camera, and a computer, in a separate vehicle wheel alignment system, configured to use images of an optical target received from the additional camera to guide placement of the positionable vehicle service apparatus relative to the vehicle are not disclosed.

The ‘609 *Murray et al.* reference is directed to a method and system for diagnosing a vehicle multi-link steering system. The figure and passages cited by the Examiner detail an optical wheel alignment system wherein cameras on the wheel alignment system observe optical targets disposed on the steerable wheels of a vehicle to determine positional parameters associated with the vehicle steerable wheels. The ‘609 *Murray et al.* reference fails to disclose a positionable vehicle service apparatus which is separate from the vehicle wheel alignment system, and further fails to disclose that images of optical targets acquired by a camera on the positionable vehicle service apparatus are utilized by the vehicle wheel alignment system computer to guide the placement of the positionable vehicle service apparatus relative to the vehicle. There is no disclosure in the ‘609 *Murray et al.* reference of a vehicle wheel alignment system configured for guiding placement of a separate vehicle service system relative to a vehicle.

At best, the '609 *Murray et al.* reference discloses a conventional wheel alignment system having alignment system components mounted on steerable vehicle wheels, which move with the wheels during steering movement. However, guided placement or positioning of these components of the vehicle wheel alignment system at locations which are relative to the vehicle is not taught by the '609 *Murray et al.* reference, and neither is the guided placement of a separate vehicle service system relative to the vehicle using the vehicle wheel alignment system. Accordingly, independent Claim 1, as amended, is not anticipated under 35 U.S.C. § 102(e) by the '609 *Murray et al.* reference.

Dependent Claims 2 and 3 each depend directly from independent Claim 1, and accordingly, are seen as novel over the '609 *Murray et al.* reference for at least the same reasons as Claim 1, and for the additional reasons set forth below.

Dependent Claim 2 requires the computer of the vehicle wheel alignment system to be configured to guide the placement of the positionable vehicle service apparatus relative to a rear thrust line of the associated vehicle. The passages cited by the Examiner at Col. 3, lines 53-57 merely describe how the '609 *Murray et al.* system is configured to compare observed parameters of a vehicle steered wheels with related specifications to determine the operational status of the vehicle steering system. The cited passages fail to disclose a separate vehicle service apparatus, and further fail to disclose a computer configured to guide placement of the vehicle service apparatus relative to a vehicle thrust line.

Dependent Claim 3 requires the positionable vehicle service apparatus to be a vehicle collision avoidance system alignment fixture. The '609 *Murray et al.* reference

fails to disclose a vehicle service apparatus which is a vehicle collision avoidance system alignment fixture, and the Examiner fails to cite any specific portion of the '609 *Murray et al.* reference in support of the rejection.

Contrary to the Examiner's statements that all elements of independent Claim 4 are disclosed by the '609 *Murray et al.* reference, at least the required limitations of a positionable vehicle service apparatus on which is mounted at least one optical target, and a computer configured to use images of the optical target on the vehicle service apparatus, received from the alignment system camera to guide placement of the positionable vehicle service apparatus relative to the vehicle are not disclosed. The '609 *Murray et al.* reference is directed to a method and system for diagnosing a vehicle multi-link steering system. The figure and passages cited by the Examiner detail an optical wheel alignment system wherein cameras on the wheel alignment system observe optical targets disposed on the steerable wheels of a vehicle to determine positional parameters associated with the vehicle steerable wheels.

As previously discussed in the context of Claim 1, the '609 *Murray et al.* reference fails to disclose a positionable vehicle service apparatus which is separate from the vehicle wheel alignment system, and further fails to disclose that images of an optical target on the positionable vehicle service apparatus are acquired by the alignment system camera to be utilized by the vehicle wheel alignment system computer to guide the placement of the positionable vehicle service apparatus relative to the vehicle. Accordingly, independent Claim 4, as amended, is not anticipated under 35 U.S.C. § 102(e) by the '609 *Murray et al.* reference.

Dependent Claims 5, 6, and 7 each depend directly from independent Claim 4, and accordingly, are seen as novel over the '609 *Murray et al.* reference for at least the same reasons as Claim 4, and for the additional reasons set forth below.

Dependent Claim 5 requires the computer of the vehicle wheel alignment system to be configured to guide the placement of the positionable vehicle service apparatus relative to a rear thrust line of the associated vehicle. The passages cited by the Examiner at Col. 3, lines 53-57 merely describe how the '609 *Murray et al.* system is configured to compare observed parameters of a vehicle steered wheels with related specifications to determine the operational status of the vehicle steering system. The cited passages fail to disclose a separate vehicle service apparatus, and further fail to disclose a computer configured to guide placement of the positionable vehicle service apparatus itself relative to a vehicle thrust line.

Dependent Claim 6 requires the positionable vehicle service apparatus to be a vehicle collision avoidance system alignment fixture. The '609 *Murray et al.* reference fails to disclose a vehicle service apparatus which is a vehicle collision avoidance system alignment fixture, and the Examiner fails to cite any specific portion of the '609 *Murray et al.* reference in support of the rejection.

Dependent Claim 7 requires that the camera on the vehicle wheel alignment system have an adjustable field of view to selectively view (1) an optical target mounted to a vehicle; or (2) the additional optical target mounted to the positionable vehicle service apparatus. The Examiner's rejection of Claim 7 is based on Figure 3 of the '609 *Murray et al.* reference, however, Figure 3 fails to show a positionable vehicle service apparatus.

Figure 3 of the '609 *Murray et al.* reference, and specifically, reference numeral (100) illustrate the components of a conventional machine vision vehicle wheel alignment system, consisting of a console (300), cameras and supports (110, 112, 114), and wheel mounted optical targets (118, 120, 122, and 124). The figure completely lacks any elements of a positionable vehicle service system which is separate from the vehicle wheel alignment system (and it's associated components).

Accordingly, Figure 3 of the '609 *Murray et al.* reference fails to show optical targets mounted to such a positionable vehicle service apparatus as well as a camera having an adjustable field of view which is selective between the vehicle-mounted optical targets and a positionable vehicle service apparatus-mounted optical target. Accordingly, dependent Claim 7 is seen as novel over the '609 *Murray et al.* reference.

With regard to independent method Claims 8 and 10, the Examiner has not set forth any specific details for rejection of the claims in view the '609 *Murray et al.* reference. ***Accordingly, if this rejection is to be maintained as to Claims 8 and 10, a specific basis for the rejection is respectfully requested.***

Independent Claim 8 sets forth a method for aligning a positionable vehicle service apparatus relative to a vehicle wherein images of optical targets mounted on the vehicle are acquired by a camera mounted on the positionable vehicle service apparatus, and are used to guide the placement of the positionable vehicle service apparatus relative to the vehicle. Independent Claim 10 is similar to Claim 8, but rather requires images of optical targets mounted to the positionable vehicle service apparatus to be acquired and processed, together with images of optical targets mounted to the vehicle, to guide the placement of the positionable vehicle service apparatus relative to

the vehicle. As set forth above in the discussion of independent Claims 1 and 4, the '609 *Murray et al.* reference fails to disclose a positionable vehicle service apparatus which is guided into position relative to a vehicle, hence, the '609 *Murray et al.* reference similarly fails to disclose any method for guiding placement of a positionable vehicle service apparatus. Similarly, with respect to dependent Claims 9 and 11, the '609 *Murray et al.* reference fails to disclose any method for guiding placement of a positionable vehicle service apparatus relative to a vehicle rear thrust line. Accordingly, Claims 8-11 are not anticipated under 35 U.S.C. § 102(e) by the '609 *Murray et al.* reference.

b. Claims 8 and 10

The Examiner's rejection of Claims 8 and 10 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,731,382 B2 to *Jackson et al.* is respectfully traversed. The Examiner's stated basis for the rejection of both Claim 8 and Claim 10 is that the '382 *Jackson et al.* reference discloses each and every limitation of the claims at Cols. 7, lines 1-21 and Col. 9, lines 1-25.

The '382 *Jackson et al.* reference fails to disclose a positionable vehicle service apparatus which is separate from a vehicle wheel alignment system configured to guide the placement of the positionable vehicle service apparatus relative to a vehicle during a service procedure. The '382 *Jackson et al.* reference is directed to a "five-camera" alignment system in which the relative positioning of left and right camera pods of a vehicle wheel alignment system, relative to each other, are calibrated using a single camera observing both the left and right camera pods. (See: Abstract) There is no disclosure in the '382 *Jackson et al.* reference of a separate positionable vehicle service

apparatus which is distinct from the vehicle wheel alignment system, or of a vehicle wheel alignment system being configured to guide the placement of the positionable vehicle service apparatus relative to the vehicle. Accordingly, the '382 *Jackson et al.* reference fails to anticipate independent Claims 8 and 10 under 35 U.S.C. § 102(e).

3. Allowable Subject Matter

The Examiner has stated that Claims 8 and 10 would be allowable is rewritten or amended to overcome the rejections under 35 U.S.C. § 112, first paragraph, as set forth in the action. However, this statement appears inconsistent with the rejection of Claims 8 and 10 under 35 U.S.C. § 102(e) set forth in para. 7 of the same action. ***Clarification of the status of Claims 8 and 10 is respectfully requested.***

4. Conclusion

Based on the foregoing, allowance of Claims 1-11 is requested. If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any issues, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Respectfully submitted,

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